PROCEEDINGS

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CALIFORNIA ACADEMY OF SCIENCES

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XI

REPORT OF THE PRESIDENT OF THE ACADEMY FOR THE YEAR 1920

By C. E. GRUNSKY President of the Academy

In Academy affairs the year 1920 may be classed as relatively uneventful. Nevertheless some progress has been made.

The membership campaign under the leadership of Mr. M. Hall McAllister has continued successful. The number of members has increased from 550 to 927. There were 403 new members admitted while the loss of members was 20 by death, 5 by resignation, and 1 dropped for arrearages.

The present membership is made up of:

Patrons	
Honorary Members	
Life Members	8
Fellows	
Mambara	
MEHIDEIS	

The Academy carries on its list of patrons the following names:

Living

Mr. William B. Bourn
Mr. William H. Crocker
Mr. Deter F. Dunne
Mr. Herbert Fleishhacker
Mr. Joseph D. Grant
Mr. A. Kingsley Macomber
Mr. William W. Mailliard
Mr. M. Hall McAllister
Mr. Ogden Mills
Mr. Alexander F. Morrison
Mr. William C. Van Antwerp

Deceased

Mr. William Alvord Mrs. Charlotte Hosmer
Mr. Charles Crocker Mr. James Lick
Mr. John W. Hendrie Mr. Ignatz Steinhart

Those who were called by death are as follows:

Mrs. Mary K. Brandegee	.Life	April 3, 1920
Dr. John A. Brashear	.Honorary	
Dr. Frank S. Daggett	.Member	
Mr. I. W. Hellman	.Member	
Mrs. Charlotte Hosmer	.Patron	November 30, 1920
Mr. G. Earle Kelly	.Member	December 15, 1920
Mr. Curtis H. Lindley	.Member	. November 20, 1920
Mr. Bruce Martin	.Member	1920
Mr. W. W. Montague	. Life	. September 28, 1920
Mr. Percy T. Morgan	.Member	April 16, 1920
Mr. Charles P. Punchard	.Member	November, 1920
Dr. Pier Andrea Saccardo	.Honorary	February 12, 1920
Mr. Leon Sloss	.Member	
Mr. L. E. Smith	.Life	October 12, 1920
Prof. Dr. H. zu Solms-Laubach	Honorary	1920
Dr. Franz Steindachner	.Honorary	December 10, 1919
Mr. Sam B. Stoy	.Member	August 18, 1920
Mr. Clement Tobin	.Member	
Dr. Ramsay H. Traquair	. Honorary	November 22, 1912
Mr. Carlos Troyer	Life	July 26, 1920
Mr. Raphael Weill	Life	December 9, 1920

The Academy has published during 1920 the following papers in continuation of the Fourth Series of the Proceedings:

Vol. II, Part II, No. XVII, pp. 311-345 DERMAPTERA AND ORTHOPTERA, by Morgan Hebard.

Vol. IX, No. XIII, pp. 331-356

NEW HEMIPTEROUS INSECTS OF THE GENERA ARADUS, PHYTOCORIS AND CAMPTOBROCHYS,

by Edward P. Van Duzee.

Vol. IX, No. XIV, pp. 357-365 REPORT OF THE PRESIDENT OF THE ACADEMY FOR THE YEAR 1919,

by C. E. Grunsky. Vol. IX, No. XV, pp. 367-396

REPORT OF THE DIRECTOR OF THE MUSEUM FOR THE YEAR 1919, by Barton Warren Evermann.

Vol. X, No. I, pp. 1-27

A FURTHER STUDY OF VARIATION IN THE GOPHER-SNAKES OF WESTERN NORTH AMERICA,

by John Van Denburgh.

Vol. X, No. II, pp. 29-30

DESCRIPTION OF A NEW SPECIES OF RATTLESNAKE (Crotalus lucasensis) FROM LOWER CALIFORNIA,

by John Van Denburgh,

Vol. X, No. III, pp. 31-32 DESCRIPTION OF A NEW SUBSPECIES OF BOA (Charina botta utahensis) FROM UTAH, by John Van Denburgh.

Vol. X, No. IV, pp. 33-34 DESCRIPTION OF A NEW LIZARD (Dipsosaurus dorsalis lucasensis) FROM LOWER CALIFORNIA, by John Van Denburgh.

Vol. X, No. V, pp. 35-46

UNDESCRIBED TIPULIDÆ (DIPTERA) FROM WESTERN NORTH AMERICA, by Charles P. Alexander.

Vol. X, No. VI, pp. 47-49

Three New Species of Dolichopodidæ (Diptera) from California and Nevada,

by M. C. Van Duzee.

Vol. X, No. VII, pp. 51-52

Two New Species of Syrphidæ (Diptera), by A. L. Lovett.

Vol. X, No. VIII, pp. 53-70

Notes on Some Undescribed Californian Helices, by S. Stillman Berry.

Vol. X, No. IX, pp. 71-75

A New Genus and Species of Grasshopper from California, by Morgan Hebard.

During the year 1920, 11 free lectures have been delivered at the stated meetings of the Academy, as follows:

January 7. "The Vegetation of New Zealand."
Mr. A. H. Cockayne, Government Biologist of New Zealand.

MARCH 3. "American Aquariums."

Dr. Barton Warren Evermann, Director of the Museum, California Academy of Sciences.

APRIL 7. "A Commodity Unit to Supplement Money as a Standard of Value."

Dr. C. E. Grunsky, President, California Academy of Sciences.

MAY 5. "Some Bird Observations on the University Campus."
Mr. Tracy I. Storer, Field Naturalist, Museum of Vertebrate Zoology, University of California.

JUNE 2. "The Work of the Audubon Society."

Mr. C. B. Lastreto, Organizer and Ex-President of the Audubon Association of the Pacific.

JULY 7. "The Birds and Mammals of the Stikine Region, British Columbia."

Mr. H. S. Swarth, Curator of Birds, Museum of Vertebrate Zoology, University of California.

August 4. "The Botanical Features of Mount Tamalpais."

Miss Alice Eastwood, Curator of Botany, California Academy of Sciences.

SEPTEMBER 1. "Injurious Insects."

Mr. E. O. Essig, Assistant Professor of Entomology, University of California.

October 6. "Hunting Grizzlies with Bow and Arrow."

Dr. Saxton Pope, Assistant Clinical Professor of Surgery, University of California,

NOVEMBER 3. "The Pan-Pacific Scientific Congress and the Hawaiian Islands."

Dr. Barton Warren Evermann, Director of the Museum, California Academy of Sciences.

DECEMBER 1. "Birds, Fur Seals, Foxes and Other Animals of the Pribilof Islands, Alaska."

Dr. G. Dallas Hanna, Curator of Invertebrate Paleontology, California Academy of Sciences.

The Sunday afternoon lectures delivered in the Museum building during 1920 have included the following:

January 4. California's Fur-Bearers.

Dr. H. C. Bryant, in charge Education and Publicity,
California Fish and Game Commission.

JANUARY 11. Life History of the Little Smelt or Grunion.

Mr. W. F. Thompson, in charge State Fisheries Laboratory, California Fish and Game Commission.

January 18. The Game Warden and His Work.
Mr. J. S. Hunter, Assistant Executive Officer, California Fish and Game Commission.

January 25. The Commercial Fisheries of California.

Mr. N. B. Scofield, in charge Commercial Fisheries
Department, California Fish and Game Commission.

February 1. The Ocean as an Abode of Life.

Dr. W. K. Fisher, Director, Hopkins Marine Station of Stanford University.

February 8. The Steinhart Aquarium.

Dr. Barton Warren Evermann, Director of the Museum, California Academy of Sciences.

February 15. The Ocean Meadows, or the Microscopic Life of the Open Sea.

Dr. C. A. Kofoid, Professor of Zoology, University of California.

February 22. Fishes of the California Coast.
Prof. E. C. Starks, Assistant Professor of Zoology,
Stanford University.

February 29. Marine Mammals.

Dr. Harold Heath, Professor of Zoology, Stanford University.

MARCH 7. Alaska and the Fur Seals.

Dr. Barton Warren Evermann, Director of the Museum, California Academy of Sciences.

MARCH 14. Life of the Deep Sea.
Prof. J. O. Snyder, Associate Professor of Zoology,
Stanford University.

MARCH 21. Oceans of the Past.
Dr. J. P. Smith, Professor of Paleontology, Stanford University.

March 28. Systematic and Economic Phases of California Marine Algæ.

Dr. N. L. Gardner, Assistant Professor of Botany, University of California.

April 4. Life Between Tides.

Dr. W. K. Fisher, Director, Hopkins Marine Station of Stanford University.

April 11. Plant Migrations.
Dr. Douglas H. Campbell, Professor of Botany, Stanford University.

April 18. The California Big Trees and History.
Dr. L. L. Burlingame, Associate Professor of Botany,
Stanford University.

April 25. Some Plant Diseases.

Prof. J. I. W. McMurphy, Assistant Professor of Botany, Stanford University.

MAY 2. The Trees of California.

Dr. Leroy Abrams, Associate Professor of Botany,
Stanford University.

MAY 9. Plants and a Hungry World.

Dr. George J. Peirce, Professor of Botany and Plant
Physiology, Stanford University.

SEPTEMBER 12. The Origin of the Polynesian People.

Dr. W. E. Safford, Bureau of Plant Industry, Department of Agriculture, Washington, D. C.

September 19. A Recent Visit to the Hawaiian Islands.

Dr. Barton Warren Evermann, Director of the Museum, California Academy of Sciences.

SEPTEMBER 26. The Solar System.

Dr. W. W. Campbell, Director, Lick Observatory, Mount Hamilton, California.

October 3. Comets.

Dr. A. O. Leuschner, Dean of the Graduate Division, University of California.

OCTOBER 10. The Binary Stars.
Dr. R. G. Aitken, Astronomer, Lick Observatory,

Mount Hamilton, California. e Nebulæ.

October 17. The Nebulæ.

Dr. J. H. Moore, Astronomer, Lick Observatory, Mount Hamilton, California.

October 24. What We Owe to Animal Experimentation.

Dr. S. J. Holmes, Professor of Zoology, University of California.

OCTOBER 31. Early Ideas of the Earth.

Prof. Earle G. Linsley, Professor of Geology and Astronomy, Mills College.

NOVEMBER 7. The Spectroscope—A Key to Celestial and Atomic Mysteries.

Dr. E. P. Lewis, Professor of Physics, University of California.

NOVEMBER 14. Some Phases of Our Modern Conquest of the Air.

Dr. W. F. Durand, Professor of Mechanical Engineering, Stanford University.

November 21. The Future of the Tropics as a Factor in World Development.

Dr. R. S. Holway, Professor of Geography, University of California.

November 28. Cipher Messages from the Stars.

Dr. J. H. Moore, Astronomer, Lick Observatory, Mount
Hamilton, California.

DECEMBER 5. Earthquakes on the Pacific Coast of North America.—I.
Dr. S. D. Townley, Professor of Applied Mathematics,
Stanford University.

DECEMBER 12. Earthquakes on the Pacific Coast of North America.—II.

Dr. S. D. Townley, Professor of Applied Mathematics,

Stanford University.

DECEMBER 19. The United States in Haiti and Santo Domingo.
Mr. M. E. Beall, Berkeley, California.

Ground has not yet been broken for the Steinhart Aquarium. This is not due to any lack of desire on the part of the Council and the Trustees to further its early construction. The trust which the Academy has accepted will be faithfully discharged. More than a year ago the bequest became available and the sum of \$250,000 was paid to the

Academy. This sum was at once invested and interest has been accumulating. Dr. Evermann, accompanied by Civil Engineer T. Ronneberg, has made an inspection trip to all the notable aquariums in the United States in order that the Academy may have the advantage of the latest and best ideas on general arrangement, lighting and operation. The architect, Mr. Lewis P. Hobart, thereupon made a number of preliminary studies from which it presently became apparent that the funds at our disposal were not adequate to provide a building of the size, dignity and architectural finish which would be required if the aquarium is given the place of honor in the Academy's building scheme. It was found impracticable, in other words, to put the aquarium to the East of the unit in which our present exhibits and activities are housed, where it could be made, if funds permitted, an imposing central feature at the rear of an aquatic court. When this fact became apparent the architect did the next best thing. He so arranged a design that only a small portion of the exterior of the building would require finishing in stone. But even with this arrangement under which only a narrow front of the building would be architecturally ornamental, there has been difficulty in finding a site at once appropriate and acceptable to the Board of Park Commissioners. The matter of selecting a site and of suggesting a building suited to the site is now in the hands of a joint committee of the Park Commission and of the Academy.

It is regrettable that the funds placed by bequest at the disposal of the Academy are limited to an amount which will not give to San Francisco all that is desired in connection with a first class, fully equipped aquarium in which the marine life of the Pacific Ocean and the aquatic life of the streams which flow into the Pacific Ocean should be adequately represented. Even with extreme restriction of the exterior ornamentation of the aquarium building it will not be possible to provide more than about 50 tanks of moderate size. There will be no space provided in accomplishing this result for fishery and display exhibits, for research work, or for offices. The bare housing of the fish tanks, and of the machinery and appliances required to store, filter, aerate and cool or heat the water, is all that can be accomplished with the means at command.

Some thought has been given to combining with the aquarium an auditorium or otherwise bringing under the same roof space that may be used for other purposes, without in any sense detracting from the distinctiveness of the Steinhart Aquarium. Nothing along this line seems possible of accomplishment. The aquarium once established will always be the "Steinhart Aquarium." Enlargement or extension by other bequests or endowments is not likely so long as the features added by such bequests or endowments are not sufficiently distinctive to perpetuate the names of those whose generosity prompts their making. Nor does it seem likely that the City, which is the beneficiary, could be prevailed on in the near future to increase the initial fund. Nevertheless, before it is too late, this thought is thrown out. It would indeed be a gracious thing if the City which has authorized the Academy to accept the bequest and to take charge of the erection and operation of an aquarium in Golden Gate Park, would add a like amount. It would thereby make possible the erection of a dignified structure adequate for immediate needs and arranged for expansion to meet any future requirements.

The financial standing of the Academy will appear from the Treasurer's report. The endeavor of the Council and of the Trustees has been to do the utmost that could be done within our resources as well in the matter of adding to the material in the Academy's collections as in research work and the publication of results. What has been done along these lines will appear more fully from the report of Dr. Evermann, the Director of the Museum, and the reports of the curators of the various departments.

As you were advised a year ago our floating debt which had been incurred during the erection of the Museum building, had been wiped out in 1919. This year we note with satisfaction that our indebtedness on the Academy's Market Street property has been reduced by \$10,000, from \$300,000 to \$290,000.

For a grizzly bear habitat group, as was noted in the President's last annual report, funds have been provided by Mr. Ogden Mills and the necessary specimens for the group have now been secured from the Yellowstone Park without

expense to the Academy, by Dr. Saxton Pope, assisted by Arthur Young and G. D. Pope. Permission was granted by the Park authorities to get four grizzly bear for this purpose. It is expected that before the close of this calendar year the group will be installed. It will fill the last available alcove and, thereafter, the need for more exhibit space will be felt more than ever.

The Academy is a growing institution, as yet but inade-quately equipped to carry on the activities which should be its special concern. It should have more housing facilities for scientific and educational natural history material. It should be engaged in carrying natural history lessons into the school rooms of the city and it should have better facilities for popular lectures on scientific subjects. Despite the present inadequate facilities the weekly lectures (Sunday afternoons) have proved very successful. Their scope appears from the list submitted. They are attended to the limit of our small auditorium's seating capacity. I am sure that I voice the sentiments of all members and friends of the Academy who have attended any of these lectures, when I say that the kindness of those who have given the lectures, frequently at no little personal inconvenience, has been sincerely appreciated.

In the President's last annual report note was made of the fact that on appeal to the Supreme Court, the will of Mr. S. F. Thorn under which the Academy was bequeathed some land near Santa Cruz and other property, had been sustained. It was subsequently learned that this decision was not rendered by the Court in banc. Upon further hearing, the Court in banc reversed the earlier decision, finding that the will was not holographic because the single word "Cragthorn" had been inserted with a rubber stamp. The will was declared illegal and it now appears that the announcement of last year was at fault and that the Academy takes nothing under the will.

Among the notable acquisitions of the Academy during the year is the W. Otto Emerson collection of bird skins, some 5300 in number. Most of the birds represented in this collection, which has great scientific value, are from Alameda County. It has come to us through the generosity of W. H. Crocker and John W. Mailliard.

Private subscriptions by a number of friends of the Academy have made possible the purchase of the Albert Prager Herbarium, which contains many valuable plant specimens from various parts of the globe. Negotiations for the transfer of this herbarium from Leipzig, Germany, the home of Mr. Prager, to the Museum of the Academy, have been completed.

Your officers again commend the zeal and ability with which the curators of the Academy's departments have conducted their work, which goes so far in maintaining the standing of the Academy as a scientific institution of real worth. Your officers are appreciative too of the interest taken by the membership in the activities of the Academy, and are gratified to note how popular the museum has become as evidenced by the large number of visitors reported by the Director of the Museum.

The Academy stands ready to enlarge its usefulness. It can do so materially, however, only through outside help. As opportunity offers this fact should be made known to those who are so circumstanced that they can serve mankind by establishing endowments for useful purposes. They should know that the Academy is ready to serve.